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**Comments of
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to the
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Chairman Hundt was correct in his recent speech to the IRTS in New York when he pointed out that the Grand Alliance has invented something more than a prettier picture. Through the ATSC Digital Television Standard, broadcasters will have a level of digital flexibility to serve the needs and interests of the American television public that it has never had in the past. But, the Chairman erred when he stated that the term "second channel" and the term "high definition" had therefore been made historical artifacts. Quite simply, without a second channel, digital television will not happen. Broadcasters cannot survive if they cannot serve both the old analog audience and the new digital audience during the transition. American citizens cannot be expected to go out and replace all their TV receivers in one "fell swoop". A loan of a 6 MHz channel is essential if the digital era is to come to television. It is absolutely required if free, over-the-air, broadcasting in the United States is to survive and progress into the digital century which will soon begin. It would seem to me that a Commission which has always held strongly to the banner of the "public interest, convenience and necessity" when it came to free over-the-air broadcasting would WANT this transition to occur in a way that promotes the new technology and does the least harm to the citizens of our nation.

When new technology becomes available in the broadcasting arena, there is always the "chicken and egg" question. In this case, will broadcasters put the new signal on the air if there are few potential viewers? And, for the equipment manufacturers, should they build digital receivers if no broadcasters are on-the-air with a digital signal? I was chief of the Mass Media Bureau when Bob Pepper's predecessor convinced the sitting Chairman at that time that it would be unnecessary to standardize AM stereo broadcasting...that the

broadcast marketplace would work quite well. And so, stereo failed to be activated on most AM stations and the AM radio band is surviving today primarily on the backs of Rush Limbaugh and other talk show hosts. Stereo television was handled differently. The FCC did standardize it, and it thrived. There are few television stations today that do not broadcast their entire day in stereo or surround sound and even the lower priced sets today are configured to decode it.

Broadcasters have given you a gift. In a virtually unanimous filing, they support some minimum level of HDTV broadcasts. If this is implemented, I have been assured that all television manufacturers will build equipment that will decode all digital formats. You will not have to worry about the chicken-and-egg. And, Commissioners, whenever you get an entire industry sector taking the same position...something rarely achieved...you should give that position great weight. Do not assume that because broadcasters take a unanimous position on such a critical question that their position is wrong. It could well be that they understand the mass media business quite correctly.

Manufacturers are now beginning to turn out digital products; transmitter manufacturers both here and in Europe are gearing up to produce a whole new generation of equipment; and, Hollywood is quietly now producing most network fare at least protecting a 16:9 window on each frame. There is confidence that digital television is actually going to happen!

One question, however, is difficult to answer, "What kind of data is the broadcaster going to transmit to the home?" As a new generation digital television broadcaster, the licensee will have the opportunity to send data along with HDTV or SDTV programming; or alternatively, during the experimental period (in the middle of the night) when the broadcaster could send nothing but data as viewers are indeed few and far between.

The 6 MHz television channel can deliver about 19 Megabits of data per second. It would be reasonable to carve out about ½ of 1 Mbps (or about 500 kilobits per second) exclusively for data delivery during the broadcast day. So, using these numbers, let's take a look at what could be delivered both during the broadcast day, and at night should the licensee wish to devote the entire channel to data at that time:

A 100-page newspaper (e.g., the NY Times or Washington Post Sunday edition) would be about 4 Megabytes of data. That entire newspaper could be transmitted in one minute during the broadcast day or in less than 2 seconds at night.

The entire Manhattan telephone directory is about 32 Megabytes. The complete directory could be transmitted during the broadcast day in nine minutes. During the night that same directory could be downloaded by viewers in about 14 seconds.

All of the college football scores for every team in the entire United States can be transmitted during the broadcast day in the time it takes to transmit 5 television frames...or about 160 milliseconds.

Perhaps the broadcaster has a long-standing real estate firm in the local community that normally advertises with the station. Nearly 200 individual listings with a full color photograph of each house can be transmitted while broadcasting a 30 second commercial for that firm. Viewers could then refer to those listings at their leisure.

Other examples could include downloading the answers to hundreds of quiz show questions so the viewer could play along. Another example -- information on all the used cars available at a dealer that advertises on the local station.

But, no matter how hard I try to think of things that could be delivered with a digital channel, broadcasters will think of others. And, in some of these will be opportunities for new revenue streams not only from “bread and butter” advertisers but from new sources none of us can predict today. You might expect that new national accounts will begin to appear...accounts that seek to deliver not commercials to the viewers, but actual hard data. Because of its “reach”, the American television industry stands uniquely ready to provide access to all our citizens every day. And, of course, a fee should be collected in accordance with the pending telecommunications legislation for the transmission of such ancillary or supplementary services. But, this issue (somehow taxing the “data profits”) is very different from auctioning the transition spectrum which, after all, will be returned to the government. That spectrum should be auctioned after the transition to digital television when it can be exploited for other uses. From an engineering perspective, you will have MORE usable and contiguous spectrum to auction and the received funds will thus be greater if you go through the transition first.

Commissioners, the private sector has done all it can do in this effort to keep this nation the undisputed leader of the world in television. In so doing, new links have been forged between the film industry, the computer industry, and the television industry. Appropriately, the matter is now secured in your hands. At a recent meeting of MSTV here in town I exhorted the Commission to not “screw it up”! Today I would rather end with a plea that you give digital television a chance to survive and grow. It will benefit all America.

And, I offer whatever expertise I have developed in the last 30 years or so to each of you. If I can help in any way as you seek to make your final decisions in this matter, do not hesitate to call on me.

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